

Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (currently amended) A method for individualizing a hearing aid in adaptation to a loudness perception of an individual, said method comprising the steps of:
measuring and quantifying loudness perception parameters of the individual, weighted by a ~~positive~~ first factor that is non-zero and non-unitary;
weighting of normal loudness perception parameters by a ~~positive~~ second factor that is different from said first factor and is also non-zero and non-unitary;
combining the weighted loudness perception parameters of the individual with the weighted normal loudness perception parameters to define a weighted loudness parameter; and
using the weighted loudness parameter for adjusting the hearing aid.

2. (previously presented) The method as in claim 1, wherein compression and/or amplification is/are adjusted in the hearing aid, for which purpose the compression and, respectively, the amplification are each determined as a function of frequency.

3. (currently amended) A method for individualizing a hearing aid in adaptation to a loudness perception of an individual, said method comprising the steps of:
adjusting the hearing aid using both (1) measured and quantified loudness perception parameters of the individual weighted by a first factor and (2) normal

loudness perception parameters weighted by a second factor; and
adjusting compression and/or amplification in the hearing aid, for which purpose the compression and, respectively, the amplification are each determined as a function of frequency, wherein
for determining the compression, the loudness perception of the individual is quantified by means of a HVLS/LOHL factor
which is determined by loudness scaling at a minimum of one frequency.

4. (currently amended) The method as in claim 3, wherein the HVLS/LOHL factor is modeled using the equation:

$$\log_{10} (\alpha) = a_a \times HV/HL + b_a \times \log (HV/HL) + VP_{\text{consta}}$$
 where
 α = a gradient of the loudness function,
HV/HL = a hearing loss in dB,
 a_a , b_a = constant function parameters, and
 VP_{consta} = an individual function parameter which adapts the HVLS/LOHL factor to data sampling points α_1 , α_2 , α_3 , ...,
and that VP_{consta} is determined on the basis of a loudness scaling performed at a minimum of one frequency.

5. (currently amended) ~~The method as in claim 2,~~ A method for individualizing a hearing aid in adaptation to a loudness perception of an individual, said method comprising the steps of:

measuring and quantifying loudness perception parameters of the individual, weighted by a first factor;

weighting of normal loudness perception parameters by a
second factor;
combining the weighted loudness perception parameters of the
individual with the weighted normal loudness perception
parameters to define a weighted loudness parameter; and
using the weighted loudness parameter for adjusting the
hearing aid, wherein
compression and/or amplification is/are adjusted in the
hearing aid, for which purpose the compression and,
respectively, the amplification are each determined as
a function of frequency, and wherein,
for determining the amplification, the loudness perception
of the individual is quantified by means of an
~~HVL0~~/HLL0 factor which is defined by loudness scaling
at a minimum of one frequency.

6. (currently amended) The method as in claim 5, wherein the
~~HVL0~~/HLL0 factor is modeled using the equation:

$$L_0 = a_L \times \text{HV/HL} + b_L \times \log(\text{HV/HL}) + \text{VP}_{\text{constL}}, \text{ where}$$

L_0 = a level of loudness = 0,

~~HV~~/HL = a hearing loss in dB,

a_L , b_L = a constant function parameters, and

$\text{VP}_{\text{constL}}$ = an individual function parameter which adapts
the ~~HL0~~/HLL0 function to the data sampling points

L_{01} , L_{02} , L_{03} , ...,

and that $\text{VP}_{\text{constL}}$ is determined on the basis of a loudness scaling
performed at a minimum of one frequency.

7. (previously presented) The method as in one of the claims
4 to 6 and 11, wherein the hearing loss is used for determining
the frequencies at which loudness scaling is performed.

8. (previously presented) The method as in one of the claims 3 to 6 and 10 to 11, wherein the value of the weighted factors depends on the assumed and/or determined accuracy of the loudness scaling data.

9. (previously presented) The method as in claim 8, further comprising the selection of a value of $1/3$ for the first factor and/or a value of $2/3$ for the second factor.

10. (currently amended) ~~The method as in claim 2,~~ A method for individualizing a hearing aid in adaptation to a loudness perception of an individual, said method comprising the steps of:

measuring and quantifying loudness perception parameters of the individual, weighted by a first factor;
weighting of normal loudness perception parameters by a second factor;
combining the weighted loudness perception parameters of the individual with the weighted normal loudness perception parameters to define a weighted loudness parameter; and
using the weighted loudness parameter for adjusting the hearing aid, wherein
compression and/or amplification is/are adjusted in the hearing aid, for which purpose the compression and, respectively, the amplification are each determined as a function of frequency, and wherein,
for determining the compression, the loudness perception of the individual is quantified by means of a ~~HVLS~~/LOHL factor which is determined by loudness scaling at a minimum of one frequency.

11. (currently amended) The method as in claim 10, wherein

the HVLS/LOHL factor is modeled using the equation:

$$\log_{10} (\alpha) = a_a \times HV/HL + b_a \times \log (HV/HL) + VP_{consta} \quad \text{where}$$

α = a gradient of the loudness function,

HV/HL = a hearing loss in dB,

a_a , b_a = constant function parameters, and

VP_{consta} = an individual function parameter which adapts
the HVLS/LOHL factor to data sampling points
 $\alpha_1, \alpha_2, \alpha_3, \dots,$

and that VP_{consta} is determined on the basis of a loudness scaling performed at a minimum of one frequency.

12. (previously presented) The method as in claim 1, further comprising the selection of a value of 2/3 for the first factor and/or a value of 1/3 for the second factor.

13. (currently amended) A method for individualizing a hearing aid in adaptation to a loudness perception of an individual, said method comprising the steps of:
measuring and quantifying loudness perception parameters of the individual, weighted by a first factor;
weighting of normal loudness perception parameters by a second factor;
combining the weighted loudness perception parameters of the individual with the weighted normal loudness perception parameters to define a weighted loudness parameter; and
using the weighted loudness parameter for adjusting the hearing aid, wherein
compression and/or amplification is/are adjusted in the hearing aid, for which purpose the compression and,

respectively, the amplification are each determined as a function of frequency, and wherein for determining the amplification, the loudness perception of the individual is quantified by means of one of an ~~HVLO/HLL0~~ factor and an ~~HVLS/LOHL~~ factor, which is defined by loudness scaling at a minimum of one frequency.